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ANTISEPTIC SURGERY.

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I desire on the present occasion to make a few remarks, and to submit the results of a series of surgical cases, which in my hands have been treated after Professor Lister's method of dressing surgical wounds.

Not long since (December 6th, 1879) at a meeting of the Metropolitan Counties Branch of the British Medical Association, held at St. Thomas's Hospital, Mr. W. MacCormack made the following remarks: "That the employment of Lister's method is not at once, or very easily acquired; it requires practice, a capacity and patience for detail, that those concerned in the management of a case shall, without reserve believe in the germ theory, or act as if they believed in it, the surgeon in charge of the case must either himself examine into and verify everything belonging to the dressing of the case, or must have some one in whom he can trust to do it for him. Less than this will not be putting Lister's method fairly to the test."

It is of no interest to us to discuss the correctness or fallacy of the germ theory and would be foreign to the object I have in hand, which is more for the purpose of bearing additional testimony to the practical usefulness of Lister's antiseptic method, than of entering into a discussion concerning a subject

which, so far, rests on a problematical basis. I will admit that, for the present, the certainty of the actual presence of germs in the air is far from being proved, but in carrying out the details of Listerism I am of the number of those who act as though they believed in the germ theory. I desire simply to report, in as few words as are convenient, the details of some of the results of the last four years, during which period Prof. Lister's antiseptic method of treating surgical injuries has been adopted by me, both in private and hospital practice. The cases may appear small numerically when laid alongside of the larger number of cases reported by our brethren in the larger fields for observation, in Great Britain and on the continent of Europe. I have seen large wounds of the soft parts, wounds opening into important joints and wounds connected with fractured bones, scalp wounds in which there was considerable laceration and stripping of the bone of its periostial covering, heal by immediate union, wherein strict antiseptic precautions were adopted. These favourable consequences have been attained without redness or swelling or pain of any kind, without discharge, except a slight serosity that hardly soiled the dressings and without any or scarcely any constitutional disturbance. Such results I had never before witnessed, during the personal observations of nearly forty years, and in all honesty must admit, that the results in my hands by following strictly Mr. Lister's instructions are what I had never before seen, under any other method of treatment. I must tell you, that at the Montreal General Hospital, I have acted as one of the surgical staff during the past 17 years. After the announcement of Professor Lister's views, on the antiseptic treatment of wounds, attempts were made on various occasions, by some of the surgeons of our Hospital to treat antiseptically various forms of injury, and even in operative proceedings antiseptics were sometimes employed, and although these measures were very imperfect, as compared to the present means at our disposal, nevertheless the results were sometimes remarkable. Listerism, however, in its perfection remained unknown to us, until it was introduced by my friend and colleague Dr. Roddick, who went to Edinburgh and studied the method under Prof.

Lister himself. To Dr. Roddick then is due the credit of being the first surgeon to introduce to our hospital, in all its completeness of detail, the antiseptic method of dealing with surgical accidents as proposed by Prof. Lister.

Dr. Roddick returned from Edinburgh with a complete outfit, consisting of spray apparatus, gauze properly charged, protective, drainage and all accessories, which are essential to faithfully carrying out Prof. Lister's injunctions. It is true that a hand spray had been employed by us, on various occasions, but there had been hitherto no definite system of action, no specially prepared dressings and not altogether that enthusiasm and firm belief in the benefit to be derived by this method, if properly and faithfully carried out. Soon after the introduction of Listerism in its completeness, the very remarkable results attracted attention and the house committee of our Hospital, on the recommendation of the medical staff, sent for and supplied us liberally with all needed apparatus and proper dressings.

The practical surgeon can realize the comfort experienced from a feeling of complete confidence in the success of any justifiable operative procedure, but more than this, he will feel encouraged to undertake operations, with Listerism, that without it he would refuse to perform. Operations under Listerism can be, and are undertaken by the surgeon and carried to a successful issue, which without it would be regarded as unjustifiable, or attempted only as a *dernier ressort*, and as being the only chance of life left to the sufferer. The surgeon who adopts the antiseptic method in operative procedures, may predict a safe and successful issue in cases, which before the introduction of this method, would have been regarded as exceedingly doubtful.

Ovariotomy.—The total number of cases that have come under my own care and on which I have operated is nine. These are not the only cases that have presented at our Hospital, but are my own personal record. Of these, three were operated on by me, before the advent of antiseptics and they were all fatal. The first case dying on the third day apparently from shock, the other two fatal cases terminating within a week from general peritonitis. The other six cases recovered at different periods,

all of these cases were operated on under the spray and with full antiseptic precautions.

I shall give a short synopsis of each case, noting any prominent feature which may be thought of interest.

Case No. IV.—B. P., æt. 24 years, came under observation 29th March, 1880. A tall, well proportioned girl, was as large as a woman at full term of pregnancy. She had always enjoyed good health, and menstruated regularly; the change made its appearance about the fifteenth year of life. Six years ago had noticed a moveable growth in left groin, but it gave no pain nor uneasiness. Three years since she observed that this growth was gradually and steadily increasing in size, until it became so noticeable as to lead to observations on the part of her relatives, which obliged her to consult her physician, who pronounced it to be a multilocular ovarian cyst. The patient was brought to Montreal on the 29th March, 1880, delay was rendered necessary in consequence of menstruation coming on the day after her admission to hospital, so that the operation for removal of the tumour was performed under the spray, on 10th April. An incision four inches in length was made, from just below the umbilicus downwards towards the pubis. The tumour was freely exposed. No adhesions existed, but there was some difficulty in emptying the sac, as it consisted of a number of small cysts, filled with thick gelatinous fluid. The left ovary was engaged. The sac was with some difficulty delivered and the pedicle moderately long was secured by two carbolized hempen ligatures which were cut short off and the stump dropped back, the right ovary was likewise found diseased, it was tied in like manner by a single ligature and removed. The entire contents and solid matter removed weighed 36 lbs. This patient made an excellent recovery. The highest temperature registered was on the third day after the operation, when the thermometer reached 102°, after which it steadily subsided and became normal on the tenth day. She left her bed on the 13th day after the operation, feeling weak, and was discharged cured on the 18th day and allowed to return home. The dressings were not disturbed until the 10th day, when they were removed and the wound found healed.

I have heard from this patient quite recently, she is strong and robust in health, but has ceased menstruating. She had a menstrual period apparently at the end of the second week after the operation, which was the last seen.

Case No. V.—Victorine V., æt. 24 years, not married, was admitted into the Private Hospital 15th March, 1881, being the subject of a large ovarian tumour apparently multilocular, with several large cysts, the following history was elicited.

She had enjoyed good health, had commenced to menstruate at the age of 14, catamenia always regular as to time and not excessive, lasting about three days, and painless.

About six years ago she noticed a swelling in the abdomen, which she declares was uniform and not situated in either groin. This gradually and steadily increased, until she became so much distended as to prevent her keeping the recumbent position. It was diagnosed to be ascites from liver obstruction. Purgatives and other means failed to reduce the swelling, and her physician relieved her by tapping; the fluid removed filled two buckets, and was thin, like water. She made a rapid recovery and on the third day was able to leave her bed. From this time, which was in March or April, 1877, the fluid rapidly accumulated, necessitating its removal every four or six weeks. So that up to the 18th February, 1881, the trochar had been used twenty five times. The fluid in quantity was on each occasion about the same as above stated, but in consistence it had changed, becoming more like gum water. She never suffered any pain or inflammatory symptoms after the tappings and with the exception of the inconvenience from distension was in good health, all the functions being regularly performed. When examined the cyst was moderately full, one month only having elapsed since the last removal of the fluid. The tumour extended to midway between the umbilicus and ensiform cartilage, there existed a well formed hymen, but with care the index finger was introduced into the vagina, the uterus was found of normal size carried over to the left side, and bulging, could be felt distinctly in Douglas' fossa, upon forcing upwards, a distinct wave was imparted to the contents of the tumour over the front

of the abdomen. The last catamenial period had occurred on the 5th March.

March 19th, the operation was performed under the spray and with full antiseptic precautions. An opening of about four inches in length from below the umbilicus downwards was made, rather firm adhesions existed in front and also at the upper part and sides of the tumour, these had to be separated with great care, as the cyst wall was rather thin, all attachments having been separated the patient rolled over on to her side and a large sized trochar plunged into the sac, which contained four or five large cysts, the sac was drawn out through the abdominal wound as it became flaccid and ultimately delivered. It sprang from the left ovary, the pedicle which was moderately long was clamped and the tumour removed, the vessels of the stump were then picked up separately and tied with fine carbolized catgut, a double carbolized silk ligature was then introduced through the pedicle beneath the clamp and the clamp removed. No bleeding occurred, but it was thought more safe to tie the pedicle in two halves with silk; this was done and the ends cut short and pedicle dropped back. The right ovary was next examined and found to contain a number of small cysts, it was therefore removed, the stump being trusted to a medium sized carbolized catgut ligature, all bleeding points were secured by fine catgut or seared with the thermo-cautery, all clots removed and abdominal cavity cleansed, the wound was then closed with three silver wire sutures and several catgut sutures and dressed in the ordinary way with antiseptic gauze and roller. The cyst with contents weighed 28 lbs. The morning after the operation the temperature was 99°, it rose to a hundred that evening and the following the second after the operation, after which it came down to 99° and to the normal standard on the fifth day, at which it remained to the end of the case, the wire stitches were removed on the ninth day, union was complete, she left her bed and went on a sofa on the eleventh day and the day following got up and dressed. This patient returned home at the end of the third week.

Case No. VI.—Catherine B., æt. 39, eight years married,

had been three times pregnant, two miscarriages at 4th month and one child living, aged six years. Since the birth of living child has not been pregnant. Menstruation began when 13 years of age and has always been regular. In October, 1879, first noticed difficulty in micturition and found she was enlarging, supposed it was from pregnancy, although the catamenia continued regular up to April or May of last year, when the flow became profuse and occurred every three weeks. In November, 1880, the abdomen was greatly distended; she was examined by a physician, who pronounced it to be an ovarian tumour. He introduced a full-sized aspirating trochar, but without any result, as no fluid was removed. She continued to enlarge steadily, and again, in December or January, 1881, she was tapped with a large-sized trochar, and about a teacupful of thick glutinous material came away; this was all that could be obtained and its removal afforded no relief. She came to Montreal and was admitted into the Montreal General Hospital, on 6th May, 1881. Patient is a slight woman, rather short, greatly emaciated and abdomen enormously distended, the enlargement appears regular and uniform. Fluctuation distinct all over abdomen, with characteristic dullness, the greatest girth was on a line two and a half inches above umbilicus and gave 47½ inches in circumference.

May 11th, the operation was performed with full antiseptic precautions. An incision four inches in length, commencing just below the umbilicus, and extending downward towards pubis, was made, this was carried through the abdominal parietes until gelatinous matter began to ooze from the wound; as the cyst appeared to have been opened, what was supposed to be its wall was separated from the parietes of the abdomen for an inch or two, when it was found to be the peritoneum much thickened and in a condition of cystic degeneration, this was freely incised; a large quantity of thick gelatinous fluid flowed away on opening the cavity of the abdomen, and the tumour brought into view. A large sized trochar was then introduced, but nothing came away, the cyst itself was then freely incised and an enormous quantity of thick gelatinous material

removed, in quantity sufficient to fill three buckets, the cyst sprang from right ovary, with a moderately long pedicle, this was clamped, the tumour removed and the pedicle secured with carbolized silk ligatures.

The contents of the left ovary was the same in character and completely filled the pelvic basin, to which it was generally adherent by firm bands, these were stripped off and the growth removed; the pedicle, which was small, was secured by a single catgut ligature. The great omentum presented the same cystic degeneration and was greatly enlarged and thickened, this was also removed, being tied in sections, six in number, with carbolized gut, the ends cut off short. The entire mass of disease being removed, all bleeding points were secured, either by fine catgut, or the hemorrhage arrested with the thermo-cautery. The abdominal cavity was then carefully sponged out and the wound closed with three silver and eight catgut sutures. Lister's gauze dressing applied with a large pad of jute, the dressings retained by a broad roller of antiseptic gauze. The operation occupied one hour and three quarters, during all of which time the spray was kept up. The entire mass weighed 46 lbs. Half an hour after the patient was removed to her bed she became collapsed and death appeared imminent, ♏ xv of ether was injected subcutaneously, hot water bottles were applied to the surface, a second injection of ether was given, and brandy in half teaspoonful doses administered every five minutes. At the end of an hour reaction was fully established and from this time she progressed favorably. The temperature rose to 103° the evening of the operation, on the following morning it was 99° and from this time the temperature remained normal at the morning observation, with a rise to 99°.4 at night, this continued with very slight variation throughout the case. She remained in a very weak state for some time, but gradually recovered her strength and left for home on 11th June, 1881.

I have heard of this patient quite recently, September 28th, she has perfectly recovered and is in robust health.

Case No. VII.—Hannah L., æt. 20, unmarried, a healthy looking, well nourished young girl was admitted into the

Montreal General Hospital, 16th May, 1881. Has always enjoyed good health, menstruated for the first time at the age of 14 and has been regular ever since. About twelve months ago, in May, 1880, she noticed her abdomen enlarged, she did not at that time feel any distinct tumour, nor can she state on which side it first appeared. Shortly after discovering the fullness, she observed that very slight exertion induced fatigue and sometimes pain in the right side and groin. This feeling of weariness and pain has she thinks increased with the growth of the tumour.

The abdomen was found much distended, being well rounded and prominent in front. It gives a measurement at umbilicus of 35½ inches, fluctuation is distinct, the slightest tap producing the characteristic wave. The uterus was small, the fundus pushed over to left side, sound enters to the normal length.

The operation for removal of the tumour was performed under the spray on May 26th. An incision three inches in length was made in the median line commencing just below the umbilicus, the tumour freely exposed the patient was turned on her side, a large trochar introduced and the sac emptied. There was one large cyst and several smaller ones, no adhesions existed, the cyst wall was readily delivered, it sprang from the left side and had a pedicle of good length and thick, which was clamped and the mass removed. The vessels of the stump were taken up and ligatured with fine carbolized catgut, the stump transfixed and tied with strong carbolized silk, the ends cut off short and the stump dropped back. The right ovary was also found diseased and had to be removed, being tied at its peritoneal attachment by strong carbolized catgut. The peritoneal cavity was carefully sponged out and several small blood clots removed. The wound was closed with two silver wire and three carbolized catgut sutures and the ordinary gauze dressing, applied with a firm pad of carbolized jute. The time occupied in the operation was a little over half-an-hour. Weight of tumour and contents 16¾ lbs.

This patient made a rapid recovery. The highest temperature noted was on the evening of the day after the operation, when

it rose to 100°.1F and throughout the case afterwards it remained at the normal standard in the morning, rising to 99½ at night. She was allowed to leave her bed on the 9th June and was discharged cured on the 15th June and left the hospital on that day.

CASE No. VIII.—Jane H., æt. 40, a rather tall but spare unmarried woman, was admitted into the Montreal General Hospital, June 1st, 1881. She is from the country, and as a girl had always enjoyed good health. Menstruation set in at the age of 18 and has always been irregular and rather scanty; in 1877 it ceased for three months, and she was treated for amenorrhœa. In August of last year she took cold and was again treated for this cessation of the menstrual flow. It returned in January last, but she was never certain as to time; the last appearance was on the 16th April last.

About July or August, 1880, she observed that her abdomen was swollen, but more on the right side. Since January last this tumour had rapidly and steadily increased. In April after the last menstrual period, she found her limbs swollen and œdematous, during the past six weeks the feet and legs have greatly increased in size, the skin being white and shining and pitting on pressure. For some months has suffered from frequent micturition and for the last six weeks has been much troubled in this respect. In September of last year and again in January, 1881, had some pain over abdomen, lasting for over a week, this was unattended by fever. This patient is of slight build, tall, very thin and presents that haggard appearance peculiar to ovarian disease. She prefers being propped up in her bed at night almost in the sitting posture, but says she can lie down. On examination abdomen found distended with a huge tumour, which yields a dull note everywhere. A number of superficial veins apparently enlarged, are seen coursing over the tumour.

The following measurements were taken:

From Symphisis Pubis to Xyphoid Cartilage	.....	17 inches.
" Umbilicus to right Anterior Superior Spine	.....	9 "
" " left " " "	.....	10½ "
" " right side vertebral column	.....	19½ "
" " left " " "	.....	20 "
Girth of Abdomen, 2 in. above Umbilicus	.....	41 "

Percussion gave a distinct wave at all parts of abdomen, dullness existed over the entire abdominal parietes as high as the ribs; on vaginal examination the uterus was small, the uterine sound, entering to the normal length, the organ appeared to be carried over to the left side and was quite movable, considerable fullness existed behind which pushed it forwards.

June 7th.—The bowels were cleansed by an enema and the urine drawn off, the patient placed under ether and the operation was performed in the usual way, with full antiseptic precautions. An incision four inches in length was made, extending from just below the umbilicus downwards in the median line, the tumour was freely exposed, it was found to be slightly adherent to the abdominal wall, these adhesions were readily broken down, the patient was rolled over on to her right side, a large-sized trochar introduced and the contents, of a dark colour, tolerably thick, flowed away. As the cyst became flaccid it was drawn out through the wound and ultimately delivered; it sprang from the left ovary.

The pedicle moderately long was clamped and the tumour removed, the vessels in the pedicle were secured by catgut and the pedicle itself transfixed and tied with two carbolized silk ligatures, the peritoneal cavity was then carefully sponged out, several bleeding points secured with fine catgut and wound closed by three silver and seven catgut sutures. From the time of commencing to give the ether up to her being placed in bed after the operation, one hour and ten minutes elapsed. She speedily recovered from the ether, one hour after she had a slight chill, ¼ gr. of morphia was given hypodermically and brandy in drachm doses, ordered to be repeated every half hour. Two hours after the operation, viz. at 4 p.m., sixteen ounces of limpid urine was drawn off, at 8.15 p.m. she again complained of pain and a desire to pass water, when twenty-two ounces of urine was again removed by the catheter, temp. 100°, pulse 98, moderately full but soft. She slept well during the night, small quantities of champagne were given occasionally. At 3 o'clock twenty-two ounces of urine was again drawn off and again at nine o'clock the following morning eight ounces of urine was

removed, at twelve o'clock four ounces of urine was drawn off, making a total of seventy-two ounces of urine secreted during the first twenty-four hours after the operation.

June 8th.—At the hour of visit she was very comfortable, the œdema of legs nearly altogether gone ; no pain or tenderness, pulse 108, temperature 99°. The temperature fell to the normal standard during the day, and remained at that with slight variation throughout the case. Nourishment in the form of milk and lime water, in small quantity and frequently repeated was given and champagne occasionally. After the fourth day she was more generously fed, but she preferred milk, which appeared to agree well with her. The bowels acted on the sixth day, the dressing was not disturbed until the eighth day, when the wound was found quite closed and the wire sutures were removed. from this time she rapidly gained strength and she was allowed up on the 10th June, the twelfth day after the operation.

Case No. IX.—This case is added to the series, although from the date it will be seen that the operation was performed after my return from the meeting at Halifax.

Annie McD., æt. 21, was admitted into the Montreal General Hospital, August 11th, 1881.

Previous History.—Had always enjoyed good health, the catemenia began at the 14th year of age, had never been regular as to time, five and six weeks would elapse between the periods and on several occasions three months had passed without any change, when it did occur it was sometimes profuse and sometimes scanty in amount, has otherwise enjoyed good health. Two years ago the secretion was arrested for several months and she consulted a physician, who gave her medicine, which after an interval restored the flow and she improved in health and strength. In January of this year, she noticed that her abdomen was enlarging on the right side below the line of the umbilicus. The tumour was quite distinct, movable, and continued steadily to increase in size. In March she became very ill and suffered from severe pain at the lower part of the abdomen more referable to right side, this soon spread over the whole abdomen. There was much fever, vomiting and excessive tenderness, she was actively

tr ed and at the end of three weeks had quite recovered, but it left her very feeble. The growth has greatly increased since this attack and the menstrual irregularity remained as before. Present condition—She is a florid complexioned girl, healthy looking although thin, has been losing flesh of late, appetite fairly good. Since March last, there has been a continual bloody discharge from the vagina, this is small in amount. The abdomen was about as large as a woman at the seventh month, the tumour could be readily made out and appeared to be made up of a number of small cysts, fluctuation was indistinct, and several hard masses could be felt. She measured 38½ in. on line with the umbilicus. By vaginal examination the uterus was found of small size, inclined to the left side and the sound entered to the normal length, the organ was slightly movable.

August 7th.—The patient was placed under ether and the operation performed under the spray. An incision three inches in length was made, extending downwards in the median line from the umbilicus. On entering the peritoneal cavity a large quantity of fluid escaped, the tumour was freely exposed, the patient turned on her side and a large trochar inserted, very little fluid escaped as the tumour was made up of a number of small cysts and solid matter, there were a few adhesions in front which readily broke down and several firm adhesions were found behind it, being attached to the mesentery, these were separated with care, but being unable to get the growth out through the incision it was lengthened to above the umbilicus and then the tumour was readily delivered. The pedicle was short and broad and engaged the left ovary. The clamp was applied and tumour removed, the pedicle was then transfixed and tied in two halves by carbolized silk, the ends cut short and the stump dropped back. The right ovary was found healthy, all bleeding points being secured and the cavity carefully sponged out, the abdominal wound was closed with silver and catgut ligatures and dressed antiseptically. The weight of the tumour and contents was 20 lbs. This patient made a very rapid recovery. The temperature rose to a 102° F. the night after the operation, it however gradually and steadily subsided

to the normal standard. She left her bed at the end of a fortnight, the wound was not disturbed until the tenth day, when the stitches were removed and it was found completely closed. She shortly after left for home, at Gaspe Basin.

Speaking on the subject of antiseptics in surgery (*Brit. Med. Journal*, Dec. 20th, 1879, page 1003), Sir James Paget is reported to have said: "There are certain groups of surgical cases in which, so far as I can yet see, it would be absolutely wrong to dispense with any portion of the most complete antiseptic treatment. Amongst these are cases of ovariotomy." This is very strong testimony coming from a surgeon of such eminence, and one who does not appear to be thoroughly convinced of the absolute benefits of antiseptics after Lister in all surgical cases.

There are other groups of disease in which Sir James Paget speaks of antiseptics in the same strong terms. Excisions of joints are amongst the number in which he believes full antiseptic precautions should be employed. In this connection I may report the results of nine cases of excision of the knee joint treated with full antiseptic precautions, and all recovered with useful limbs; several, in a very short space of time. The splint used in these cases was that recommended by Mr. P. H. Watson of Edinburgh, employing parafine to consolidate the splints, and the antiseptic dressing was in each instance applied outside the splint. These are my own personal record.

On a former occasion I recorded eleven cases of excision of the knee joint, all my own, with one death from pyæmia and one subsequent amputation, these are to be found in the first volume of Transactions, published by this Association. Paget remarks, in connection with lumbar abscesses: "Another group of cases is the opening of large abscesses. I remember to have believed, a few years ago, and I think I rightly believed, that I had never seen a patient recover who had a lumbar abscess opened by free incision; I believe every one died. Since that time, I have heard of and seen a number of cases where psoas abscesses or large abscesses in any part have been opened with absolute impunity under antiseptic treatment."

In this connection I have to report four cases of psoas and

lumbar abscess, opened during the past year, with full antiseptic precautions, three cases of huge peri-nephritic abscess and three cases of large empyema, all operated on under full antiseptics and all terminating favorably; in these cases free incision was practised, and a large-sized drainage-tube introduced and retained in the abscess cavity. With the exception of one case, I did not observe what has been reported by others, viz. the arrest of secretion of pus from the abscess cavity after evacuation of its contents, but then in all these in which this result did not follow the abscess cavity did not completely empty itself at the time it was opened. In the one exceptional case, that of a little girl, with disease of the spine and psoas abscess, the opening was made in the outer side of the thigh, and at the second dressing there was merely a trace of pus and subsequently serum alone flowed away until all discharge ceased and the wound closed at the end of the second week.

The delay in publishing this paper has given me an opportunity of reading what has been recently said on this subject before the International Medical Congress, held in London. Mr. Spencer Wells, in speaking on the question of antiseptics and drainage says, "what appears to me so remarkable is, that while in general antiseptic surgery drainage is so very essential, is indeed a fundamental part of the system, in my own experience of ovariotomy, and of the removal of uterine tumors, antiseptics have abolished drainage. I have not even used a drainage tube for more than three years." And again he observes, "since adopting antiseptic precautions, either fluids do not form, or if they do, they do not putrefy and they are absorbed without doing any harm, without leading to any febrile rise of temperature." Such, indeed, was the result in all of the cases above recorded. No drainage was secured; the abdominal wound was in each case closed after arresting all hæmorrhage and carefully cleansing the abdominal cavity of all clots and other foreign matter.

Some stress has been laid on the sayings of Professor Lister, in connection with the use of the spray. In the Sep-

tember number of this Journal,* Prof. Lister is reported to have said, (referring to the use of the spray,) "I am not certain but I shall give it up, I am not at all sure but that before the next meeting, two years hence, I shall have abandoned the spray altogether." This report differs somewhat from what is to be met with in the *Lancet* and *Medical Times*. In the report of this meeting in the *Medical Times* of Aug. 20, page 233, it will be found that Prof. Lister, "insisted that the comparison of ovariotomy with other operations cannot fairly be made." . . . "He scarcely hoped that many of the precautions he now uses will be dispensed with; but if the time should ever come when it was proved to demonstration that no floating particles were present in the air which could cause putrefaction, he would heartily join in the now well-known exclamation *fort mit dem spray!*"

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